

B. Amendments to the Specification

Please correct page 1, lines 17-22 as follows:

The present invention relates generally to the generation of hydrogen gas and the employment of it as a combustible fuel. More particularly, the present invention relates to an "on-demand" chemical system for producing hydrogen gas and using it for propulsion, wherein critical elements are recovered and recycled ~~of the type in U. S. Pat. No. Class 423, Subclasses 657 and 658.~~

Please correct page 7, lines 4-11 as follows:

Turning now to the drawings, Figure 1 shows the overall block diagram of the preferred system. A large, upright, cylindrical liquid holding tank 1 acts as a reservoir and as a return destination. ~~Water~~ Liquid preferably comprising water and potassium hydroxide solution can enter tank 1 via valve 10, and it can exit via line 29 and shut-off valve 4. When valve 4 is opened, fluid, preferably a hydroxide solution, flows into generating tank 2 via a conduit 40, ~~to be as~~ explained hereinafter. Resulting hydrogen gas is outputted via line 30 into a humidity control tank 3. Humidity is controlled in this tank, and hydrogen gas collected and outputted via line 32 reaches pressure valve 5. Tanks 1-3 comprise welded, high pressure vessels that are cylindrical, rigid, and upright.

Please correct page 8, lines 1-27 as follows:

With joint reference now directed to Figures 3 and 4, tank 2 comprises a rigid, upright, generally cylindrical enclosure like the other tanks in the system. Tank 2 can be selectively filled with liquid from tank 1 via line 40 (Fig. 1) and fitting 19 (Fig. 3). External pressure is applied to inlet gas outlet 21, as explained later. The reference numeral 17 broadly designates the ~~level of~~ hydroxide solution forced into tank 2 for hydrogen generation. A large inspection fitting 16 at the top of tank 2 (Figs. 3, 4) can be removed to permit user access into the tank interior 45. The reference numeral 20 (Figs. 3, 4) broadly designates hydrogen gas bubbles that are yielded upon

the reaction between the solution 17, and the plurality of aluminum tubes 18 disposed in an orderly and regular array within the tank 2. When fitting 16 is removed, and after draining out fluid 17, these elongated, cylindrical aluminum tubes 18 may be placed within the tank. ~~Afterwards,~~ Afterwards, returning fitting 16 atop the tank 2 allows the interior to be sealed and pressured.

As best seen in Figure 4, each of the fuel tubes 18 is preferably tubular, and preferably they comprise aluminum. In the best mode the tubes are 2.5 inches outer diameter, with a 2.0 inch inner diameter. Since the tubes 18 have a hollow interior, a maximal exposure of metal to hydroxide solution results, so the reaction speed is increased. In fact, the reaction is highly exothermic, and generates hydrogen under considerable pressure (i.e., 20-300 PSI). As the reaction continues, the aluminum tubes reduce to powder . ~~the~~ The aluminum hydroxide waste collects as dust or fine grained powder ~~a-~~ 51 (Fig. 4) at the bottom of the tank 2, and it can be removed during regular maintenance and periodic tank cleaning, as fuel tubes 18 (Figs. 3, 4) are periodically replaced to recharge the system.